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REMARKS

It is believed that the following remarks attend to all rejections and objections presented in the pending February 3, 2003 office action; these remarks are numbered with corresponding paragraphs to this office action. The related applications section is amended to clearly recite lineage to the earliest parent patent application. New dependent claims 23-25 recite specific sensor types, as clearly supported throughout Applicants' specification.

Informalities

1. The oath is considered deficient because a listing of inventors is not provided. A new declaration is included herewith, and signed by the inventors, to attend to this issue; the new declaration clearly lists all the inventors on page 1. A separate declaration is set forth for each inventor, pursuant to MPEP 201.03B.

2. Claims 1-22 are objected to for certain informalities. Specifically, claim 1 is objected to for the word "users". Claim 1 is now amended to recite "Internet" users. Claims 7 and 8 (and also claim 6) are amended to recite "mobile power sensor" to correct antecedence. The Examiner has objected to "sensor" in claim 15 as without proper antecedence (in line 6); however, line 4 recites "at least one sensor," providing proper antecedence. Claim 17 is deemed correct for the same reasons. Reconsideration is requested. In claim 22, an "a" is inserted to for grammatical reasons, as indicated by the Examiner.

Reconsideration is requested for each of the objections presented in the pending office action in paragraphs (1) and (2).

3-4. Claim rejections - 35 U.S.C §102(b)

Claims 15, 19 and 20 stand rejected under 35 USC § 102(b) as being anticipated by U.S. Patent No. 4,822,042 ("Landsman"). Applicants respectfully disagree. To anticipate a claim, the reference must teach every element of the claim and "the identical invention must be shown in as complete detail as contained in the ... claim." *MPEP 2131* citing *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989).

Landsman does not teach every element of claim 15. Amended claim 15 requires the following step elements:

- (1) integrating a sensing unit with the sport implement so that the sensing unit is non-interfering with normal operation of the sport implement, the sensing unit having at least one sensor co-located with the sensing unit;
- (2) processing data from the sensor and within the sensing unit when operated by the user; and
- (3) wirelessly transmitting the processed data to a remote receiver, the processed data being indicative of the athletic performance of the user.

Landsman teaches a tennis racket 2 with a plurality of sensors 12a-d used to detect shock waves around a periphery 10 of frame 4 (emphasis added). *Landsman, col. 3, lines 25-50*. Applicants' sensing unit has a sensor co-located with the unit, such as shown as unit 10, FIG. 1 and unit 3000, FIG. 84E.

In the pending Office Action, the Examiner states that Landsman (in col. 3, lines 47-55) teaches sensors attached to the frame; the sensors connected by leads (embedded into frame 4) to a micro-circuit within handle 6. *However*, never once does Landsman recite that the sensors too are embedded into the racquet (or co-located with the micro-electronics) – in fact, Landsman teaches away from this in col. 3, lines 47-50: “It should be understood that these sensors may be attached to either the strings or the frame by many conventional methods which may include, for example, crimping or gluing” (emphasis added). The sensing “unit” (including sensors) of Landsman is not, therefore, integrated within the tennis racquet.

Therefore, with respect to Applicants' claim 15, there is no need for the separate web of sensors 12a-d taught by Landsman. Because Landsman does not teach or disclose the elements of claim 15, it cannot anticipate claim 15. Claims 19 and 20 depend from claim 15 and benefit from like arguments; they too cannot be anticipated by Landsman since Landsman does not teach or disclose each and every element of claims 19 and 20. By way of example, amended claim 19 narrows claim 15 by further reciting that the sensing unit is integrated into a body of the tennis racquet (see unit 3000, FIG. 84E). Since the sensing unit has the sensors, they too are integrated into the body. This is not taught by Landsman, and reconsideration is accordingly requested. In claim 20, Landsman does not teach determining impact from sensors integrated with the sensing unit; rather Landsman only teaches sensors mounted separate from the micro-circuit and about the tennis racquet frame.

Reconsideration of each claim 15, 19, 20 is requested.

5-6. Claim Rejections - 35 USC §103

Claims 1, 2 and 11 stand rejected under 35 USC § 103 as being unpatentable over U.S. Patent No. 6,020,851 ("Busack") in view of U.S. Patent No. 4,089,057 ("Eriksson"). Respectfully, Applicants disagree and traverse the rejections. Applicants believe, for example, that Busack and Eriksson do not render any of the claims *prima facie* obvious, as explained below.

The following is a quotation of from the MPEP setting forth the three basic criteria that must be met to establish a *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants' claim 1 requires the following steps:

- 1) coupling a mobile sensor with each of the persons;
- 2) downloading data generated by the mobile sensor to an Internet-accessible database; and
- 3) processing the data to compare athletic performances of the multiple persons, wherein Internet users may review comparisons by accessing the database through the Internet.

Applicants' amended claim 11 now recites that the vehicle is non-motorized vehicle.

Ericksson teaches a shock sensitive radio transmitter that attaches to a ski, a stationary radio receiver, a plurality of optical sensors, and an electronic unit for determining jump length. There is no teaching or disclosure of downloading data from a mobile sensor to an Internet-accessible database or processing data to compare athletic performances such that Internet users may access the database remotely. Ericksson also does not teach attaching multiple sensors to multiple persons but only teaches a single, serial ski jumper with a single unit. Claim 1 explicitly requires attachment of a mobile sensor to several persons and Ericksson does not teach or show this.

Busack teaches an auto race monitoring system that determines position and attitude of race cars. Busack purports to have a figure 2 to show features of a data acquisition chip 30 within each car, but Busack does not have a figure 2 and therefore cannot support such an embodiment. In any event, Busack does not teach attaching a mobile sensor ~~to~~ a plurality of persons and downloading data from the multiple sensors to determine athletic performance. The data Busack describes are vehicle parameters such as engine temperature, speed and oil pressure (see col. 3, lines 1-6) – these are not athletic performances of a person, as required in Applicants' claim 1. Busack's data acquisition chip is not itself a sensor, and acts to "acquire information" (e.g., speed) of the vehicle. See col. 3, lines 1-7.

Referring again to *prima facie obviousness*, first there must be some suggestion or motivation, either in Busack and/or Erickson, or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. There is no motivation to combine Busack with Ericksson, neither in the references or in the prior art. Busack and Ericksson are non-analogous art (as argued below); one skilled in the art of auto race monitoring would not look to a ski jump system of Ericksson. There is also no express motivation within the references to combine Busack with Ericksson. Second, there must be a reasonable expectation of success – if the references are combined – to render claim 1; however, this too is not reasonable. Ericksson's optical ski jumping method and device (remote optical sensing and lasers) would not reasonably utilize the data acquisition chip of Busack to measure "speed" as athletic performance. Ericksson also teaches only a single skier, and does not teach comparing athletic performances among a plurality of persons (and neither does Busack!). The use of vehicle parameter data from Busack does not modify Ericksson so as to measure skier speed without Ericksson's plurality of optical sensors. Neither Busack nor Ericksson teach attaching the sensor to multiple persons that also generates the data used to compare athletic performance. Third, the prior art reference (or references when combined) must teach or suggest all the claim limitations; however Busack and Ericksson do not teach every element, as described above (these references are discussed individually in paragraphs above only to illustrate their failure to teach elements of claim 1; combining Busack with Ericksson produces exactly the same result – the combination of Busack with Ericksson also does not teach all the elements of claim 1). Applicants specifically refer to MPEP 2143.01, which states that "ordinary skill in the art" cannot be used to teach modifications of Busack and Ericksson.

Though we have already argued why Busack and Ericksson cannot be reasonably combined to render claim 1, Applicants further refer to MPEP 2141.01(a) with regard to analogous art, because we argue in addition that Busack and Ericksson are not analogous art. Therefore, one skilled in the art would not be inclined to combine Busack with Ericksson (again, even the combination does not reasonably render claim 1). According to MPEP 2141.01(a), the structure and function of Busack and Ericksson is relevant to whether one of ordinary skill would combine the references. Once again, Ericksson teaches a shock sensitive radio transmitter that attaches to a ski, a stationary radio receiver, a plurality of optical sensors, and an electronic unit for determining jump length; Busack teaches an auto race monitoring system that determines position and attitude of race cars, and a data acquisition chip that acquires speed. The structure and function of Busack and Ericksson are therefore quite different and should not be considered analogously by one of ordinary skill. Nonetheless, even if combined, there is absolutely no reasonable chance of success in rendering claim 1 by the supposed combination; the “skill of one in the art” at the time of the invention is inapplicable to make the modifications of Busack and Ericksson necessary to render claim 1.

Though not required, Applicants have amended claim 1 to recite that the attachment of the mobile sensor also generates the data used to compare athletic performances. Clearly, Busack and Ericksson fail to teach this aspect. Accordingly, Ericksson and Busack do not render claim 1 obvious; Applicants kindly request reconsideration.

Claims 2 and 11 depend from claim 1 and benefit from like arguments. Applicants again request reconsideration.

7. Claims 3, 10, 12 and 13 stand rejected under 35 USC § 103 as being unpatentable over Busack in view of Ericksson as applied to claim 1, and further in view of U.S. Patent No. 4,757,714 (“Purdy”). Respectfully, Applicants disagree and traverse the rejections. Applicants believe, for example, that Busack, Ericksson and Purdy do not render any of claims 3, 10, 12 or 13 *prima facie* obvious, as explained below.

We have already argued the inapplicability of Busack and Ericksson as to claim 1 and under 35 USC § 103. Specifically, Busack and Ericksson – even if combined – do not reasonably teach the elements of claim 1. Purdy teaches a Doppler speed sensor attached to a person. But Purdy also does not teach the steps of claim 1, as narrowed by claim 3, 10, 12 or 13. Specifically, consider Applicants’ claims 12 and 13: claim 12 requires that the sensor be

attached to a body of each of the persons, while claim 13 requires that the sensor be attached to clothing of each of the persons. Clearly, Busack and Ericksson have absolutely no teaching as to such features. Busack and Ericksson also do not teach elements of claim 1, as argued above. The addition of Purdy also does not teach the elements of claim 1; for example it does not teach comparing data amount multiple sportsmen. Claims 3, 10, 12, 13 depend from claim 1 and benefit from like arguments.

Moreover, there is no reasonable chance of success to modify Purdy, Busack and Ericksson to render any of claims 3, 10, 12, 13. Purdy's Doppler sensor would not reasonably integrate with either Ericksson's optical sensors or Busack's data acquisition chip to compare athletic performances among a plurality of persons. The skill of one of ordinary skill in the art at the time of the invention is not applicable to modify Busack, Ericksson, Purdy to render claim 1 (see MPEP 2143.01); and such a modification is clearly required. Reconsideration of claims 3, 10, 12, 13 are thus requested.

8. We appreciate the indication of allowable subject matter in claims 4-9, 14, 16-18 and 22, as cited in paragraph (8) of the office action.

Applicants include three new claims 23-25 which benefit from like arguments above, and also patentably distinguish over the prior art. Applicants thus argue that claims 1-25 are allowable and request a notice of allowance. Applicants request an opportunity to interview this case in the event any claims are further rejected so that these issues may be better framed prior to appeal. The \$27 fee for the three additional dependent claims and the \$55 fee for an extension of time within the first month are submitted herewith. It is believed no additional fees are due. If any additional fee is due, please charge Deposit Account No. 12-0600.

Respectfully submitted,

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